

REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

The Examiner is thanked for returning an initialed copy of the Form PTO-1449 filed with the IDS of September 16, 2004. However, it is noted that no mention is made of such return on the front Office Action summary page – and that, in contrast to usual practice, a copy of the September 16, 2004 IDS statement itself was also returned.

At the same time, no mention or return of applicant's September 25, 2003 IDS and associated PTO-1449 was made or attached to the Office Action. Accordingly, it is suspected that instead of an initialed copy of the PTO-1449 filed September 25, 2003, somehow a copy of the September 16, 2004 IDS itself was returned.

Out of an abundance of caution, applicant now attaches a duplicate of the September 25, 2003 IDS, PTO-1449 and references cited therein. The Examiner is respectfully requested to return a fully initialed copy of this PTO-1449 so as to complete the record and insure that these references have also been considered.

Under the circumstances, it is not believed that any additional IDS fee for this stage of prosecution should be required. However, if such is required, then authority is hereby given to charge that fee to our Account No. 14-1140.

The rejection of claims 1-16 under 35 U.S.C. §103 as allegedly "anticipated" by Ito '636 in view of Inoguchi '530 is respectfully traversed. In this regard, it is assumed that the Examiner intended to allege "obviousness" rather than "anticipation".

One aspect of the applicant's invention that is reflected in independent claim 1 requires the extrusion screw to have a downstream larger diameter portion so as to facilitate extrusion of molded ceramic material having larger diameters. As pointed out in the specification, prior approaches have restricted the maximum diameter of ceramic moldings so that in order to extrude a large diameter molding it has in the past been necessary to use a large extruding apparatus provided with a large diameter extrusion screw. In one aspect of the applicant's invention, the smaller overall extrusion apparatus is employed where only a final "diffusion" portion of the extrusion screw has a relatively large diameter. The earlier "pressure" portion of the extrusion screw can still have a relatively smaller diameter.

Indeed, the secondary reference cited by the Examiner (Inoguchi '530) explicitly depicts and extruder 1 associated with a die 2 outputting a reduced diameter extruded ceramic structure 8.

The Examiner relies primarily upon Ito '636 even though Ito is directed towards a special kind of extruder for making plexifilamentary fiber out of high density polyethylene (HDPE). The extruder depicted in Ito's Figures 6 and 7 (which are the ones relied upon by the Examiner) feeds input materials through port 17 and 18 into metering zones 14, 15 and 16 (Figure 6) and into a mixing zone 22 (Figure 7) before being forced through and "exit opening 20" into a downstream fiber spinning apparatus.

The whole structure, function, purpose, materials, etc. of Ito '636 is remarkably different from that being claimed here in many respects. However, perhaps it is sufficient to note that the diameter of the various screw extruder portions in both Figures 6 and 7 are equal along the

length of the extruder. That is, contrary to the Examiner's allegation, Ito's "dulmage" screw part is not of greater diameter than that of its "pressing screw part". Indeed, although the Examiner has put the phrase "pressing screw part" in quotes, the undersigned has been unable to find such language at columns 30-31 where Figures 6 and 7 are discussed. Nor is there any mention in the text that contradicts the showing in the drawings of equal diameters along the various portions of the extruder structure shown in Figures 6 and 7.

The Examiner's allegation that Ito's extruder has the ability to knead and guide material towards a molding die is also clearly erroneous. The whole of the Ito '636 teaching is to merely mix HDPE material and introduce it into downstream spinning apparatus so as to obtain a plexifilamentary fiber. If the Examiner finds any teaching in Ito about a downstream "molding die", it is respectfully requested that such be particularly pointed out in the next action.

Indeed, the Examiner already recognizes and admits that Ito '636 does not "teach the production of ceramic molded materials". To supply this admitted deficiency, the Examiner relies upon Inoguchi '530. However, as already noted, Inoguchi also fails to teach novel aspects of the applicant's claimed invention – including a larger diameter downstream portion of the extruder screw.

The undersigned cannot find any teaching or suggestion anywhere in either of these two references for combining them and indeed since they are directed to entirely different purposes and functions, that is not surprising. The Examiner alleges, without identifying any support whatsoever, that it would be "obvious" to modify Ito '636 from producing polymer "molds" (something that Ito really does not teach) to produce "ceramic molds due to the success and ease

for cheaper and faster ceramic mold production to occur through modifying the apparatus to handle ceramic mixing instead of composite/plastic mixing”.

With respect, it is noted that there is absolutely no support in either of the cited references for the Examiner’s hypothesis. If there is any such support present, the Examiner is respectfully requested to particularly point it out in the next action.

In view of such fundamental deficiencies with respect to recitations even in independent claim 1, it is not believed necessary at this time to further detail the additional deficiencies with respect to dependent claims 2-16.

The provisional rejection of claims 1-16 under the judicially created doctrine of double patenting vis-à-vis claims 1-12 of copending application 10/669,507 is also respectfully traversed.

The Examiner quotes language from claim 1 of the cited application ‘507 and underlines a considerable portion thereof which is asserted to indicate the difference between that claim and what is presently being claimed. First of all, with such a considerable portion of underlining, it is clear on its face that these two claims are directed to much different structure. However, perhaps it will suffice to merely note that the Examiner has not identified any portion of claim 1 in application ‘507 that requires a diffusion screw part having a screw diameter larger than that of a pressure screw part located upstream in the extruder structure. As noted above, this is an important feature of claim 1 of the present application – and it simply has no teaching or suggestion anywhere in the claims of the cited copending application.

If this ground of rejection is to be continued, the Examiner is respectfully requested to carefully point out where such teaching can be found in the cited copending application – and why, on its face, the substantial underlined portion of the copending application claim which the Examiner admits to be different is not sufficient in itself to demonstrate non-obviousness vis-à-vis the copending application claims.

The rejection of claims 1-16 under the judicially created doctrine of double patenting vis-à-vis claims 1-13 of Yamaguchi et al. '025 is also respectfully traversed.

Once again, the Examiner quotes claim language from Yamaguchi '025 and asserts it to be identical to quoted claim language from claim 1 of the present application. However, the Examiner completely overlooks the fact that claim 1 in the present application requires, inter alia, a diffusion screw part having a screw diameter larger than that of an upstream pressure screw part in the extruder apparatus. The Examiner does not even comment upon this nor even allege that there is such teaching in the cited reference. Accordingly, this as well as the previous double patenting rejection appears to be clearly erroneous on its face.

Attention is also directed to new method claim 17 which requires, inter alia, passing ceramic molding material through first and second extrusion screw passages having first and second diameters and first and second lengths respectively, the first diameter being less than the second and the first length being greater than the second. As already noted above, there is simply no such teaching or suggestion in the cited art.

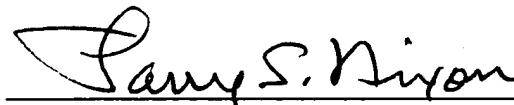
Accordingly, this entire application is now believed to be in allowable condition and a formal Notice to that effect is respectfully solicited.

YAMAGUCHI et al
Appl. No. 10/669,599
March 1, 2005

Respectfully submitted,

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